



ProMark™ 120

powered by
ashtech



**Versatile GNSS Solution
with Exceptional Post-Processing**



GLONASS
VERSATILE
PRODUCTIVITY

EASY-TO-USE





ProMark 120

The Spectra Precision ProMark™ 120 GNSS system is the most versatile post-processing solution, designed for easy and efficient land survey applications. Thanks to the embedded Ashtech Z-Blade technology as well as GPS and GLONASS signals tracking, ProMark 120 provides high-precision measurements even in very demanding or obstructed environments.

The very intuitive ProMark Field software is designed for simple and trouble-free use. It provides all the tools you need, without any unnecessary or complicated features. Its lightweight, but rugged and waterproof handheld design, all-day-long autonomy, and large memory make ProMark 120 the perfect solution for easy and efficient surveying.

Designed as a scalable solution, ProMark 120 can be easily upgraded to such capabilities as GLONASS, RTK or GPRS and be used not only in post-processing but also in RTK or GIS applications. Built on the state-of-the-art Windows Embedded Handheld 6.5 platform with integrated wireless communications, ProMark 120 is a truly versatile and complete offering.

Outstanding GPS & GLONASS Performance

- Ashtech Z-Blade GNSS centric signal processing
- Short occupation time
- Extended productivity in obstructed conditions

Unparalleled Ease-Of-Use

- Intuitive ProMark Field software
- Lightweight and rugged handheld design
- All-day-long operations with extended memory and battery

Versatile Solution

- Extended survey scalability: RTK, GLONASS, GIS options
- State-of-the-art Windows Embedded Handheld 6.5 open platform
- Complete wireless communications

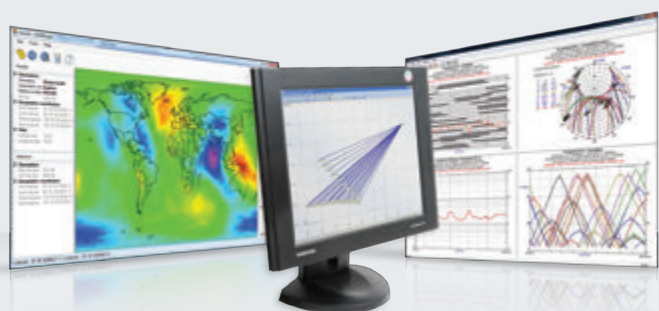


ProMark Field Software

Easy-to-use and very intuitive, ProMark Field software is designed for simple and trouble-free use of the ProMark 120. It provides all necessary tools for efficient post-processing survey as well as simple RTK jobs, including raw data recording, rover and base configurations, static or kinematic surveys, network connection settings, or stake out. ProMark Field software brings to ProMark 120 users a simple but powerful tool, without any unnecessary or complicated features.

Spectra Precision Survey Office Software

Spectra Precision Survey Office software is ideal for processing and analyzing GNSS survey data recorded in the field. With Spectra Precision Survey Office software you have the ability to work with RTK and Static/PPK data to generate reports as well as identify and correct field errors. The intuitive, integrated Spectra Precision Survey Office program saves time with its short learning curve and powerful features.



ProMark 120 Technical Specifications*

GNSS Characteristics

- 45 parallel all-in-view channels
 - GPS L1 C/A, L1 P-code, full wavelength carrier
 - GLONASS L1 C/A, full wavelength carrier
 - SBAS: WAAS/EGNOS/MSAS
- Fully independent code and phase measurements
- Advanced multipath mitigation
- Ashtech Z-Blade technology for optimal performance
- Up to 20 Hz real-time GPS, GLONASS, SBAS raw data (code and carrier) and position output
- Supported data formats: ATOM (Ashtech Optimized Messaging), RTCM-2.3, RTCM-3.1, CMR, CMR+, DBEN, LRK
- NMEA 0183 messages output
- RTK Network: VRS, FKP, MAC

Accuracy Specifications (HRMS) ^{1 2 3}

- Static post-processing: 5 mm + 1 ppm typical
- Kinematic post-processing: 12 mm + 2 ppm typical
- RTK: 10 mm + 1 ppm typical
- DGPS: < 30 cm + 1 ppm typical
- SBAS: < 50 cm

RTK Initialization (on-the-fly)

Initialization time

- < 3 min typical (GPS + GLONASS)
- < 5 min typical (GPS only)

Range

- Up to 10 km typical, GPS + GLONASS
- Up to 7 km typical, GPS only

Reliability

- Up to 99.9% typical

Processor

- Marvell® PXA 320
- Clock frequency: 806 MHz

Operating System

- Microsoft Windows® Embedded Handheld 6.5
- Languages available: English, French, German, Greek, Italian, Japanese, Korean, Portuguese, Spanish, Chinese
- Software package includes:
 - GNSS Toolbox for GNSS control
 - Internet Explorer
 - E-mail client
 - Microsoft Office Mobile
 - Transcriber (handwriting recognition)
 - ActiveSync

Communication

Cellular

- Built-in GPRS, EDGE class 12 modem Cinterion MC 75i
- Quad-band 850/900MHz, 1800/1900 MHz

Bluetooth

- Bluetooth 2.1 (class 2) with DER
- Profiles: SPP, DUN, FTP, OPP, HSP, A2DP

Other

- Wireless LAN 802.11b/g (SDIO slot)

Physical Characteristics

Size

- Receiver: 190x90x43 mm (7.5x3.5x1.7 in)

Weight

- Receiver only: 0.48 kg (1.06 lb)
- Receiver with battery: 0.62 kg (1.43 lb)

User Interface

Keyboard

- Alphanumeric virtual keyboard
- 4-way navigation, OK, menu, escape, zoom in/out, contextual keys

Display

- Color TFT High resolution sunlight readable display with touch screen
- Size: 3.5" portrait

Memory

- SDRAM: 256 MB
- User data storage: 2 GB NAND Flash (non volatile)
- SDHC memory card slot

Environmental Characteristics

- Operating temperature: -20° to +60°C (-4 to 140°F)
- Storage temperature: -25° to +70°C (-13 to 158°F)
- Humidity: 90%
- Waterproof
- Vibration and Shock: ETS300 019, MIL-STD-810 method 514.5
- Free pole drop

Power Characteristics

- Removable battery: Li-Ion, 6600mAh
- Battery life: > 8 hrs @ 20 °C with GNSS on ⁴
- Charging time: 3 hours
- External power: 9-28 VDC

Multimedia & Sensors

- Camera 3M pixels
- E-Compass
- G-Sensor
- Microphone & Speaker

Software / Firmware Options

Firmware options

- GLONASS
- RTK
- GSM/GPRS Modem
- GNSS L2 ⁵
- Fast Output

Software options

- Spectra Precision Survey Office software

Standard Accessories

- Integrated stylus
- Docking station
 - Unit charging
 - RS232 Interface
 - USB Host and Device
 - Additional battery charging slot
- Universal A/C adapter
- USB data cable
- ASH-660, L1 GPS/GLONASS antenna
- Field bracket
- Antenna vertical extension
- HI tape
- Field soft bag

Optional Accessories

- ASH-661, L1/L2 GNSS antenna ⁵

⁽¹⁾ Including all available options

⁽²⁾ Accuracy and initialization specifications may be affected by atmospheric conditions, signal multipath, satellite geometry and corrections availability and quality. Position accuracy specifications are for horizontal positioning. Vertical error is typically < 2 times horizontal error.

⁽³⁾ Performance values assume a minimum of five satellites and following the procedures recommended in the product manual. High multipath areas, high PDOP values and periods of severe atmospheric conditions may degrade performance.

⁽⁴⁾ Steady state value for baselines < 50 km after sufficient convergence time.

⁽⁵⁾ No BT or WLAN are used, backlight at default setting (50% brightness), varies with temperature.

⁽⁶⁾ Optional upgrade to ProMark 220.

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To locate your nearest distributor, visit www.spectraprecision.com. Specifications and descriptions are subject to change without notice. Please visit www.spectraprecision.com for the latest product information.

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